

# Grid-Connected PV Capacity (kW) Installed in California

	kW Installed	Percent of Total
<b>California Energy Commission*</b>	48,603	48.17%
<b>California Public Utilities Commission*</b>	29,427	29.16%
<b>Sacramento Municipal Utility District</b>	9,575	9.49%
<b>Los Angeles Department of Water and Power</b>	9,572	9.49%
<b>Pre-1998</b>	1,918	1.90%
<b>City of Riverside Public Utilities</b>	502	0.50%
<b>City of Anaheim Public Utilities</b>	337	0.33%
<b>City of Palo Alto Utilities</b>	292	0.29%
<b>City of Roseville Electric</b>	159	0.16%
<b>City of Burbank Water and Power</b>	131	0.13%
<b>City of Pasadena Water and Power</b>	84	0.08%
<b>Imperial Irrigation District</b>	62	0.06%
<b>Modesto Irrigation District</b>	60	0.06%
<b>City of Santa Clara Electric Utility</b>	54	0.05%
<b>City of Ukiah Public Utilities</b>	20	0.02%
<b>Azusa Light and Water Department</b>	20	0.02%
<b>City of Glendale Water and Electric</b>	19	0.02%
<b>Pacific Power</b>	16	0.02%
<b>Truckee-Donner Public Utilities District</b>	12	0.01%
<b>City of Redding Electric Utility</b>	10	0.01%
<b>Healdsburg Municipal Electric Department</b>	10	0.01%
<b>City of Lompoc Electric Department</b>	9	0.01%
<b>City of Alameda Power and Telecom</b>	5	0.00%
<b>City of Lodi Electric Utility</b>	4	0.00%

<b>TOTAL</b>	<b>100,901 kW</b>
--------------	-------------------

<b>100.90 MW</b>
------------------

This analysis tracks the capacity of grid-connected PV installations in California from 1981 until the present. The vast majority of the early installations can be attributed to the work done by the Sacramento Municipal Utility District (SMUD). Beginning in 1998, the Energy Commission's Emerging Renewables ("Buydown") Program began offering rebates for grid-connected "emerging" systems in the service territories of the three largest Investor Owned Utilities (IOUs) - PG&E, SCE and SDG&E. In 2001, the Public Utilities Commission began the Self-Generation Incentive Program. The "Self-Gen" Program also offers rebates, but the program is administered by the utilities (PG&E, SCE, SDG&E and SCGC) directly. The Los Angeles Department of Water and Power (LADWP), as well as many of the smaller utilities, offer their own incentive programs.

\* The Energy Commission's Emerging Renewables Program is open to the ratepayers of PG&E, SCE and SDG&E. The Public Utilities Commission's Self-Generation Incentive Program is open to the ratepayers of PG&E, SCE, SDG&E and the SCGC.

**Updated as of 3/31/05**

# Grid-Connected PV Capacity Installed in California

## YEAR

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
<b>Program</b>																										
Sacramento Municipal Utility District	0	0	0	1,133	0	909	0	0	0	0	0	12	0	794	358	476	309	147	215	421	1,321	1,613	418	1,126	324	9,575
California Energy Commission*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	181	619	726	4,034	8,102	12,273	18,846	3,822	48,603
Pacific Gas and Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	360	487	2,041	4,951	7,418	11,909	2,514	29,740
Southern California Edison	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	120	250	133	1,118	2,108	3,156	4,617	743	12,245
San Diego Gas and Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	106	866	1,042	1,675	565	6,584
Bear Valley Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	24	0	0	33
Los Angeles Department of Water and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	102	432	589	2,573	3,829	2,047		9,572
California Public Utilities Commission*																										29,427
Pacific Gas and Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,671	4,208	10,178	1,167	17,224
Southern California Edison	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	114	2,649	3,149	1,690	7,602
San Diego Gas and Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	74	1,971	947	479	3,471
***Southern California Gas Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	1,100	0	0	1,130
Pre-1998	37	38	11	12	15	63	-	4	59	15	17	477	806	(336)	(250)	378	110	464	-	-	-	-	-	-	-	1,918
City of Palo Alto Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	16	101	73	40	45	3	292
City of Santa Clara Electric Utility	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	34	14	4	4	0		54
City of Pasadena Water and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84	0	0		84
City of Burbank Water and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	123		131
City of Anaheim Public Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	102	17	107	50	60	2	337
City of Redding Electric Utility	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	9		10
City of Glendale Water and Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0	0		19
City of Riverside Public Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	150	3	243	78	28		502
City of Roseville Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	55	43	17	35	159
Pacific Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	6	0	0		16
City of Alameda Power and Telecom	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	1	0	0		5
City of Ukiah Public Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	8	0		20
City of Lodi Electric Utility	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0		4
Imperial Irrigation District	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	8	40		62
Modesto Irrigation District	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0		60
Azusa Light and Water Department	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	20
Healdsburg Municipal Electric Department	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	3		10
City of Lompoc Electric Department	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9		9
Truckee-Donner Public Utilities District	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	0	3	1	2		12
<b>TOTAL</b>	<b>37</b>	<b>38</b>	<b>11</b>	<b>1,145</b>	<b>15</b>	<b>971</b>	<b>0</b>	<b>4</b>	<b>59</b>	<b>15</b>	<b>17</b>	<b>489</b>	<b>806</b>	<b>458</b>	<b>128</b>	<b>854</b>	<b>418</b>	<b>798</b>	<b>967</b>	<b>1,701</b>	<b>6,260</b>	<b>14,570</b>	<b>26,910</b>	<b>36,677</b>	<b>7,552</b>	<b>100,901</b>
<b>Cumulative Total</b>	<b>37</b>	<b>75</b>	<b>86</b>	<b>1,231</b>	<b>1,245</b>	<b>2,217</b>	<b>2,217</b>	<b>2,221</b>	<b>2,280</b>	<b>2,295</b>	<b>2,312</b>	<b>2,801</b>	<b>3,606</b>	<b>4,064</b>	<b>4,193</b>	<b>5,046</b>	<b>5,465</b>	<b>6,263</b>	<b>7,230</b>	<b>8,931</b>	<b>15,191</b>	<b>29,761</b>	<b>56,672</b>	<b>93,349</b>	<b>100,901</b>	

### NOTES

\* The Energy Commission's Emerging Renewables Program is open to the ratepayers of PG&E, SCE, SDG&E and Bear Valley Electric. The Public Utilities Commission's Self-Generation Incentive Program is open to the ratepayers of PG&E, SCE, SDG&E and the SGGC.

\*\* The 2005 data is current as of 3/31/05

\*\*\* The Southern California Gas Company (SCGC) has paid on over 5.9 MW of PV. However, the Gas Company has overlapping territory with several electric utilities that are reporting on the same projects. For projects that have participated in multiple programs with the Gas Company, the totals will be reported by electric utilities. Projects that have only participated in the Gas Company rebate program will be reported under the Gas Company header.

"Pre-1998" Row: These numbers were derived by subtracting the total kW installed by SMUD each year from the totals contained in Appendix A of the 2001 EPRI Report titled "California Renewable Technology Market and Benefits Assessment." In some years, there is a negative number. This obviously did not happen. To be consistent with the EPRI data, it was decided to keep the negative number rather than make more assumptions. Similarly, when determining the number of systems by year, the results showed negative numbers. Again, to be consistent with the EPRI data, it was decided to keep the negative number rather than make more assumptions.

In some cases, the 2002 totals for the smaller utilities reflect the cumulative total of all PV installed, not just the 2002 total.

Many of the utilities contacted had, at one time, a solar rebate program. It is possible other utilities have rebate programs, or other utilities may have installed PV, but those are not accounted for in this summary.

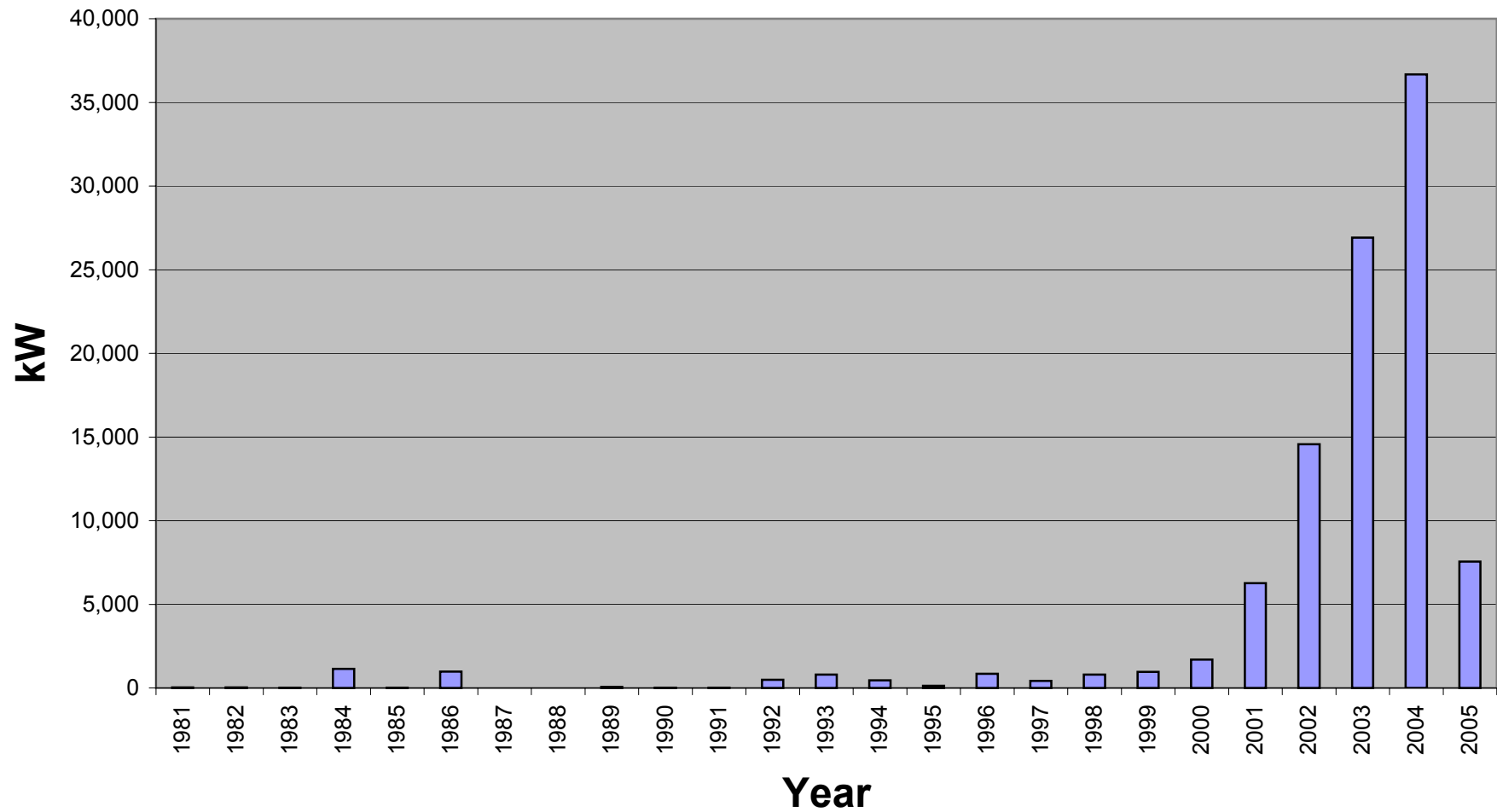
The Energy Commission numbers do not include any Publicly Owned Electric Utility installed systems. The Energy Commission has paid for 123 systems, representing 345 kW. However, to avoid double counting, these numbers were subtracted from the yearly totals.

The majority of programs report their watts in PTC. PTC stands for "PVUSA Test Conditions." PTC watt rating is based on 1000 Watt/m2 solar irradiance, 20 degree Celsius ambient temperature, and 1 meter/second wind speed. The PTC watt rating is lower than the "Standard Test Conditions" (STC), a watt-rating used by manufacturers. Known programs that do not use PTC include: Los Angeles Department of Water and Power (STC); City of Riverside Public Utilities (DC output).

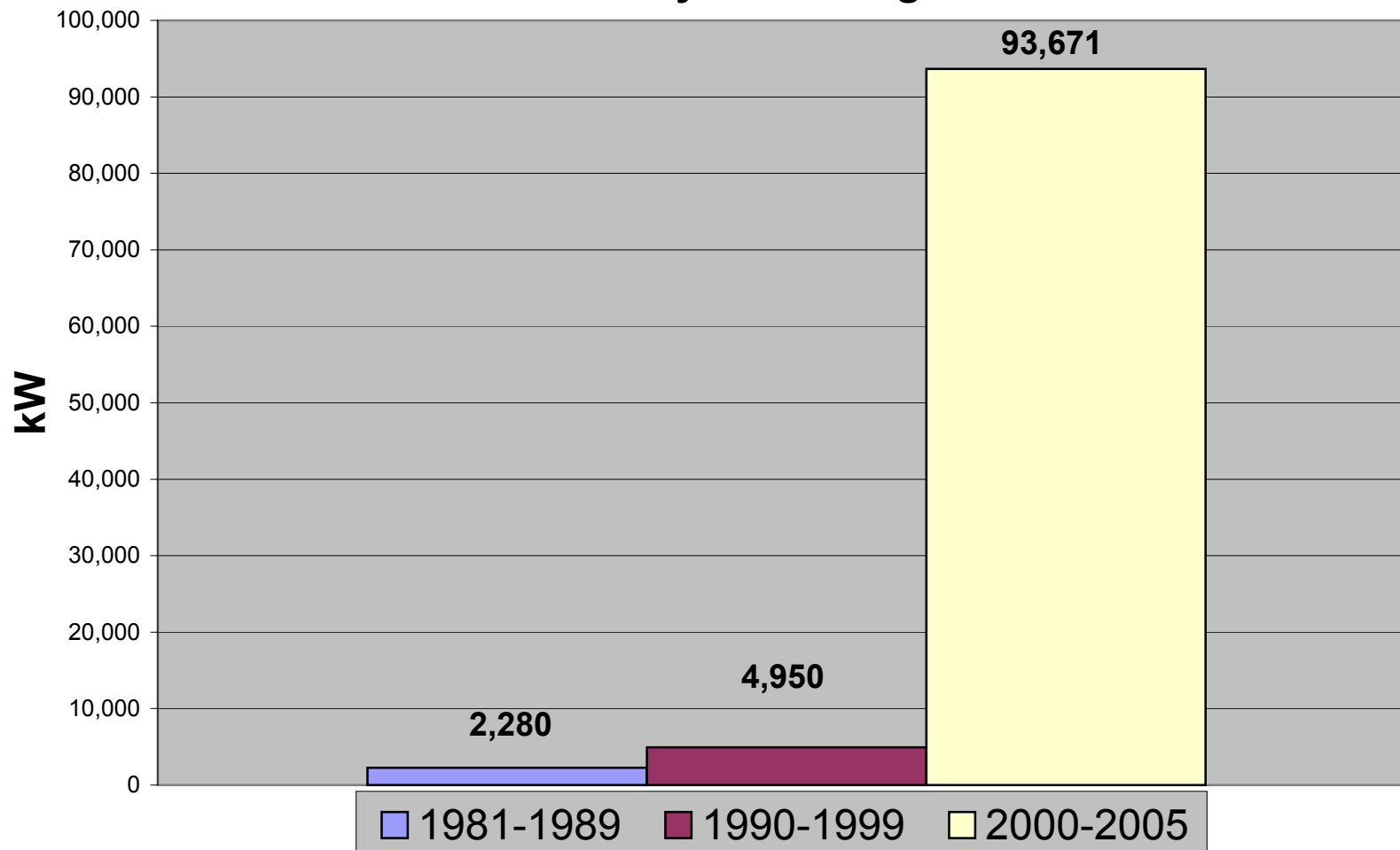
Between the 3rd and 4th Quarter 2004, SMUD revised their historical PV installation numbers. The reported amount of SMUD-installed PV declined by a total of 2.5 MW. SMUD does not know the exact cause for this decline. Two possible reasons that might cause differences between the earlier (higher) amount and the current (lower) amount could be when the system was reported installed may not correspond to when SMUD records the meter set date (which is what the current data uses); and, possibly, with earlier systems, the methods used for estimating system size was likely a DC rating system. Currently, SMUD uses CEC AC ratings for customer owned systems, and a slightly more conservative method for SMUD owned systems.

Updated as of 3/31/05

# Grid-Connected PV Capacity Installed in California By Year

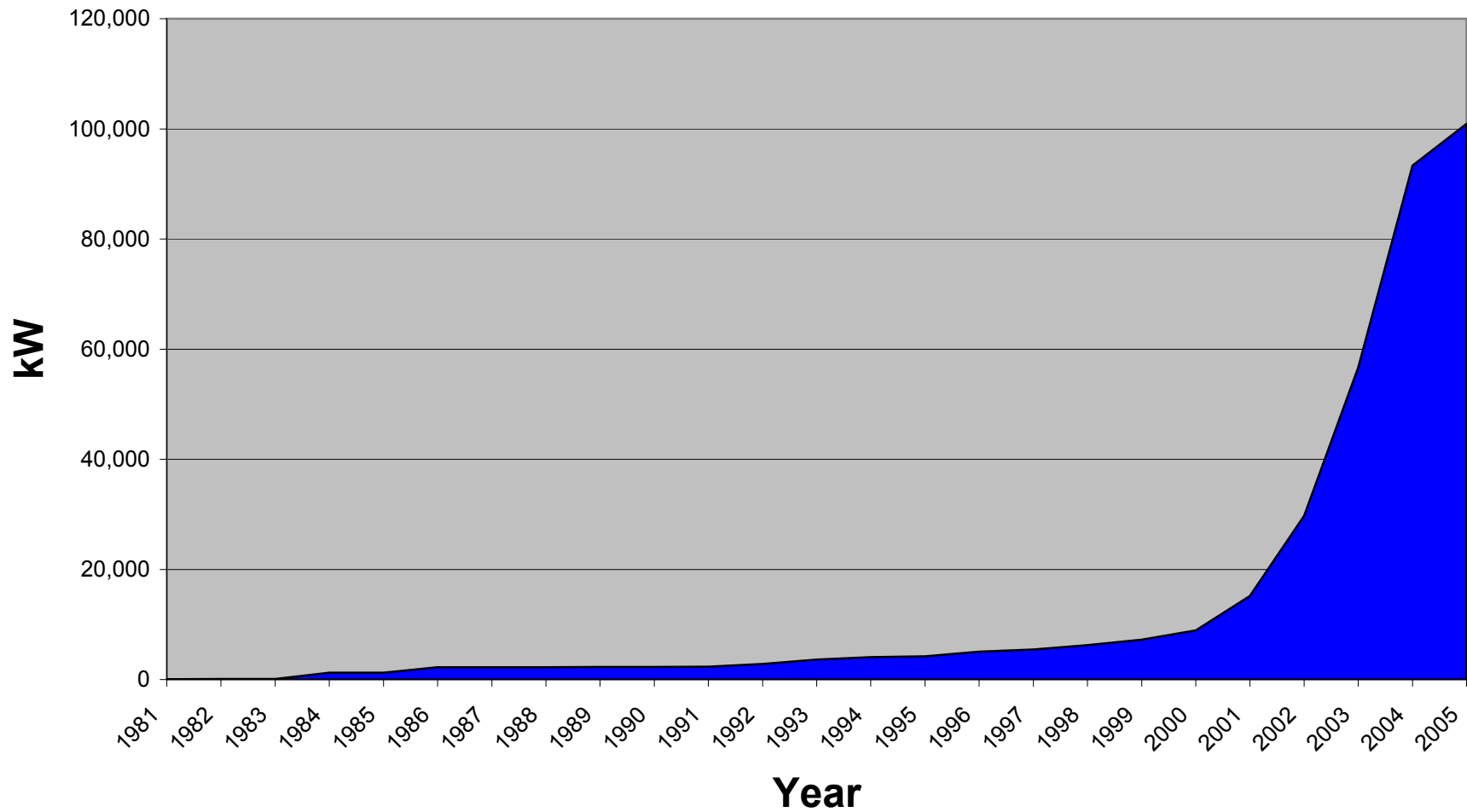


## Grid-Connected PV Capacity Installed in California by Date Range

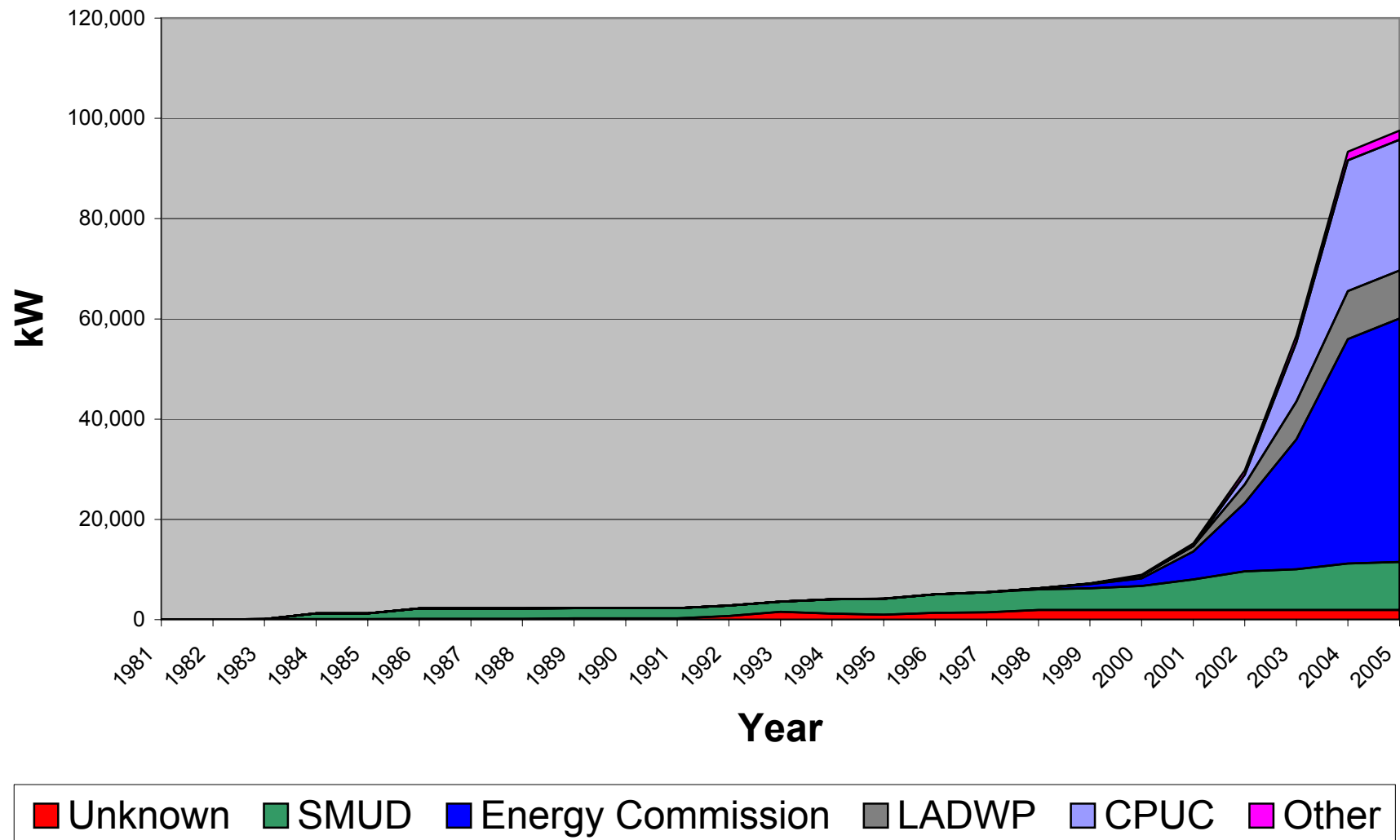


# Grid-Connected PV Capacity Installed in California

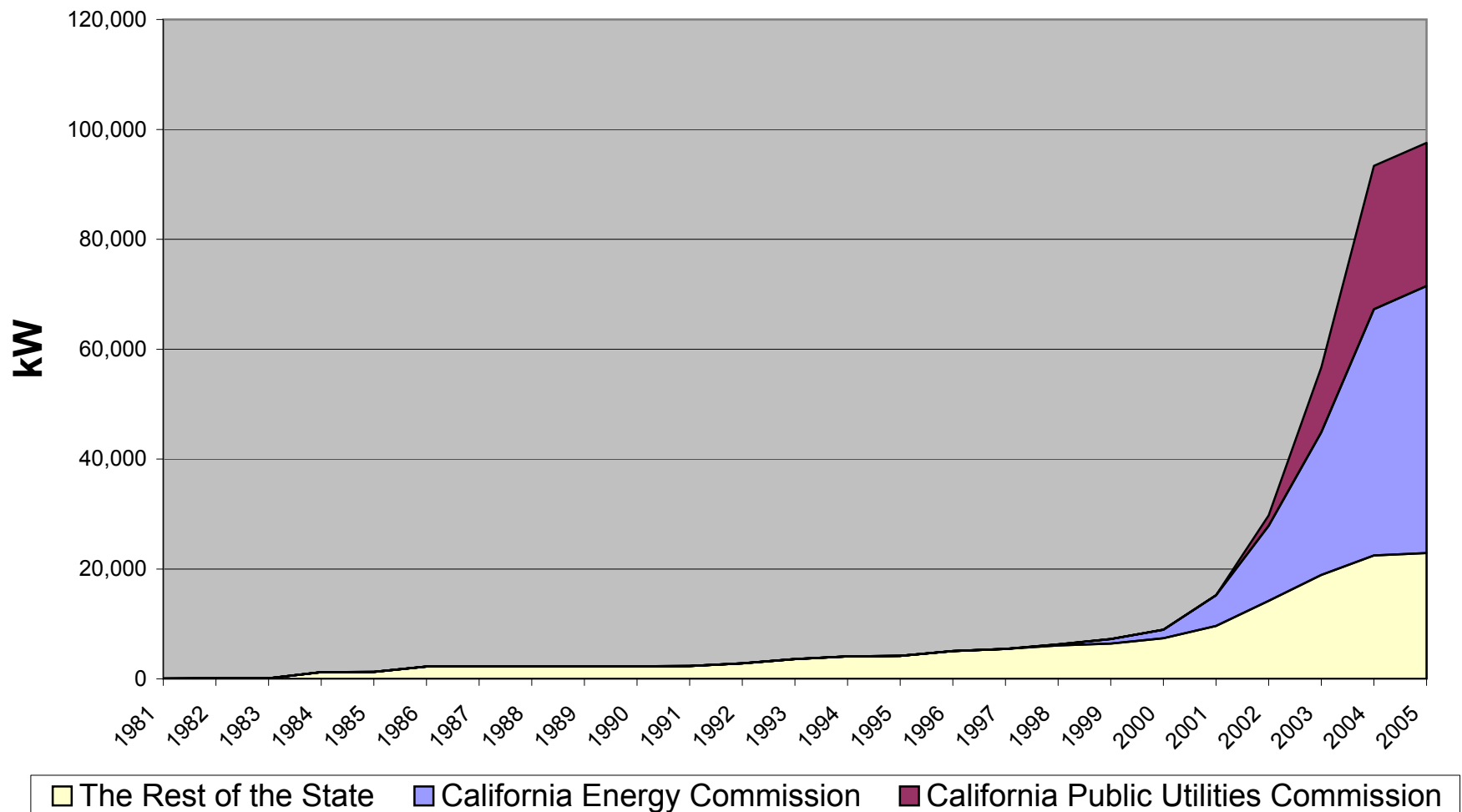
## Cumulative



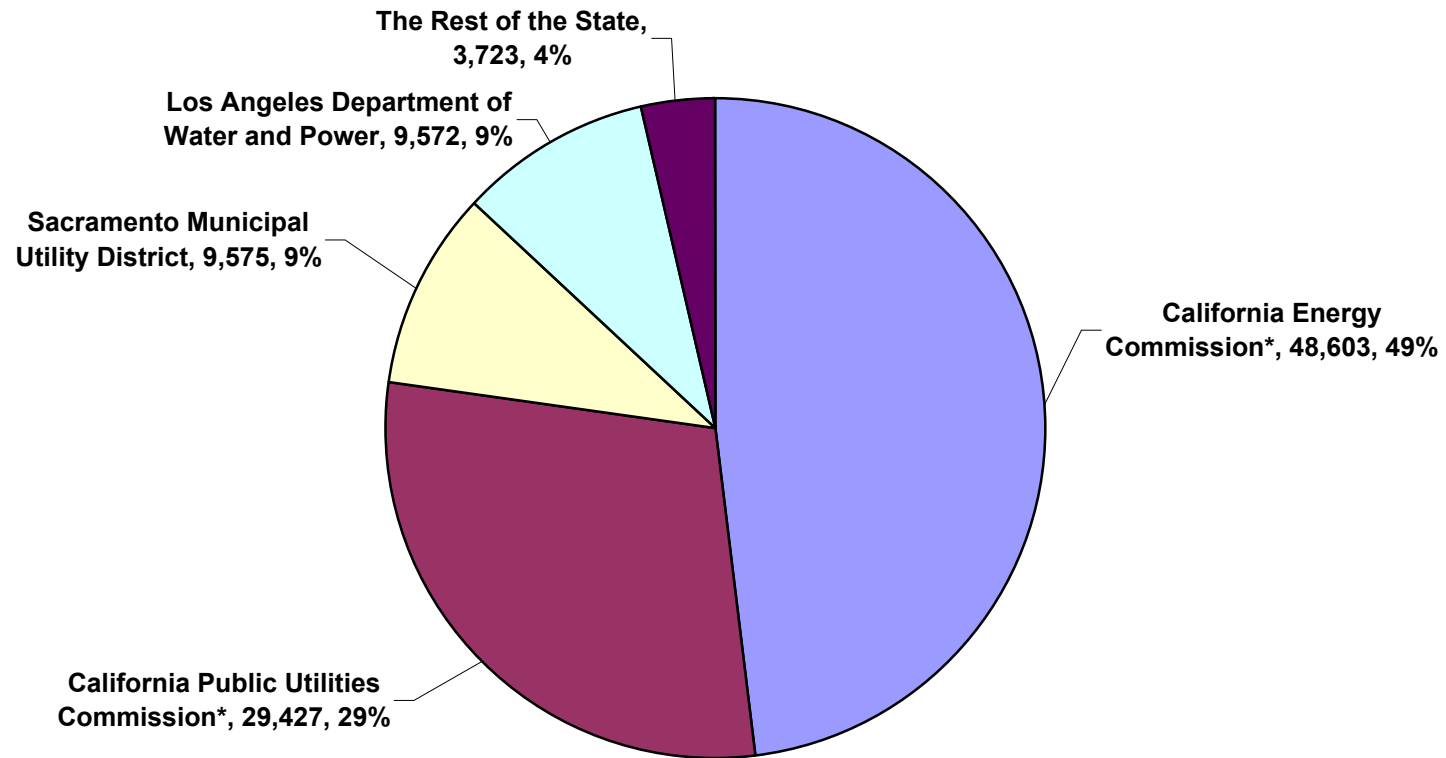
## Grid-Connected PV Capacity Installed in California Cumulative



## Grid-Connected PV Capacity Installed in California Cumulative

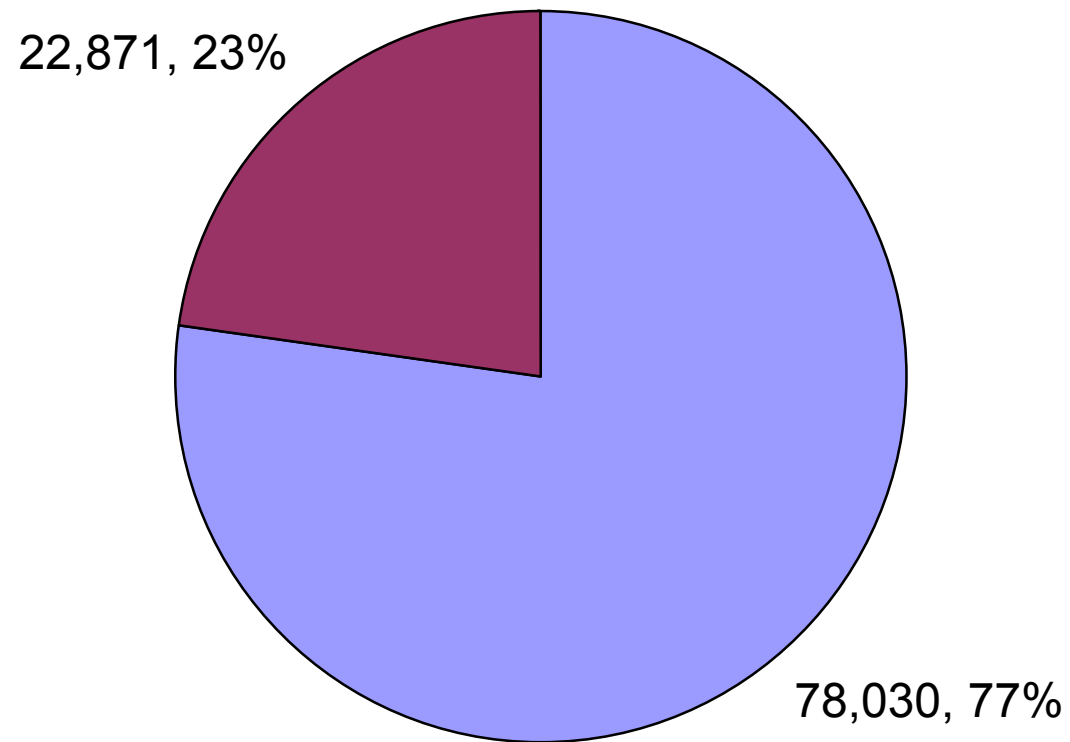


## Grid-Connected PV Capacity Installed in California Cumulative, kW





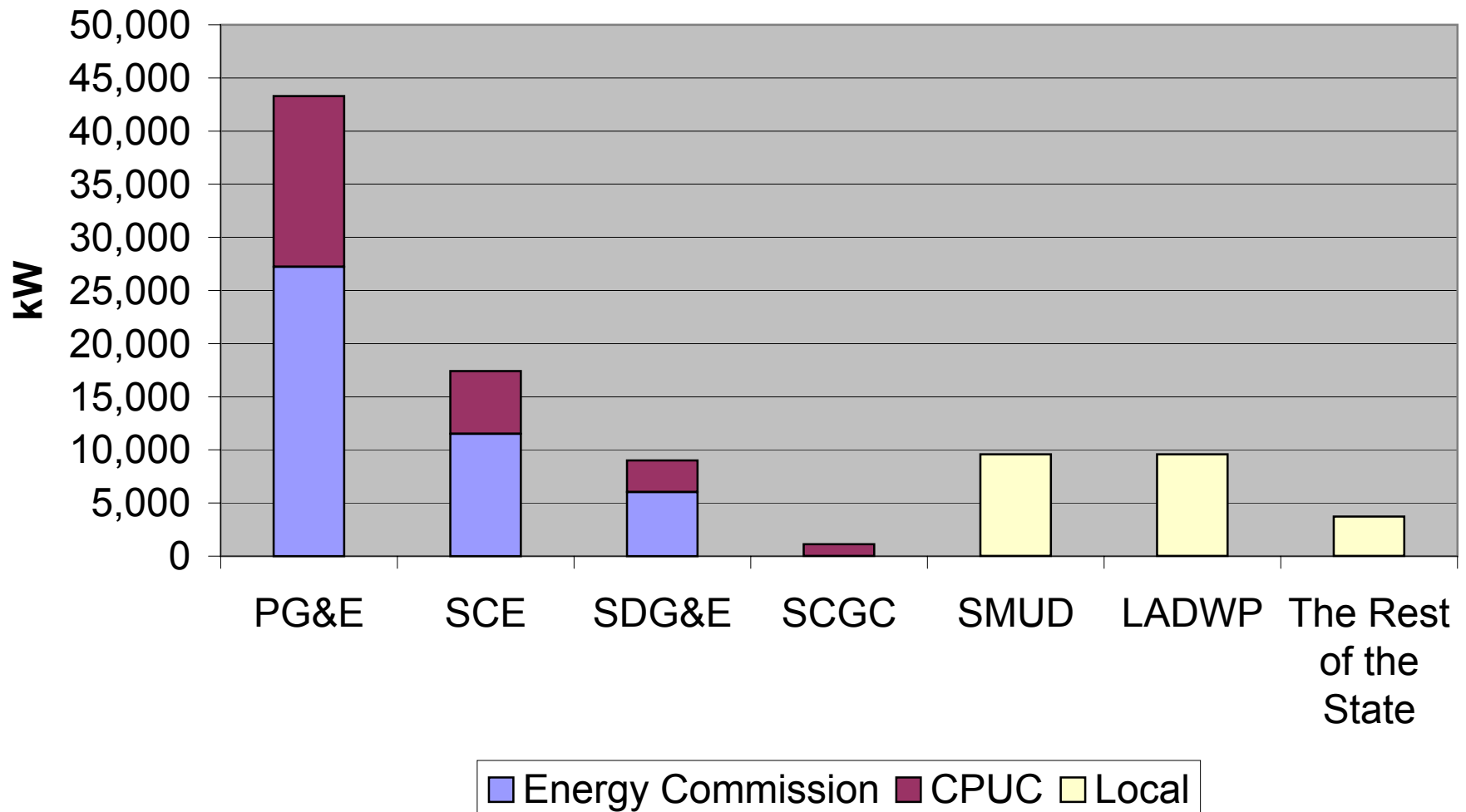
## Grid-Connected PV Capacity Installed in California IOU vs. Local Program (kW)



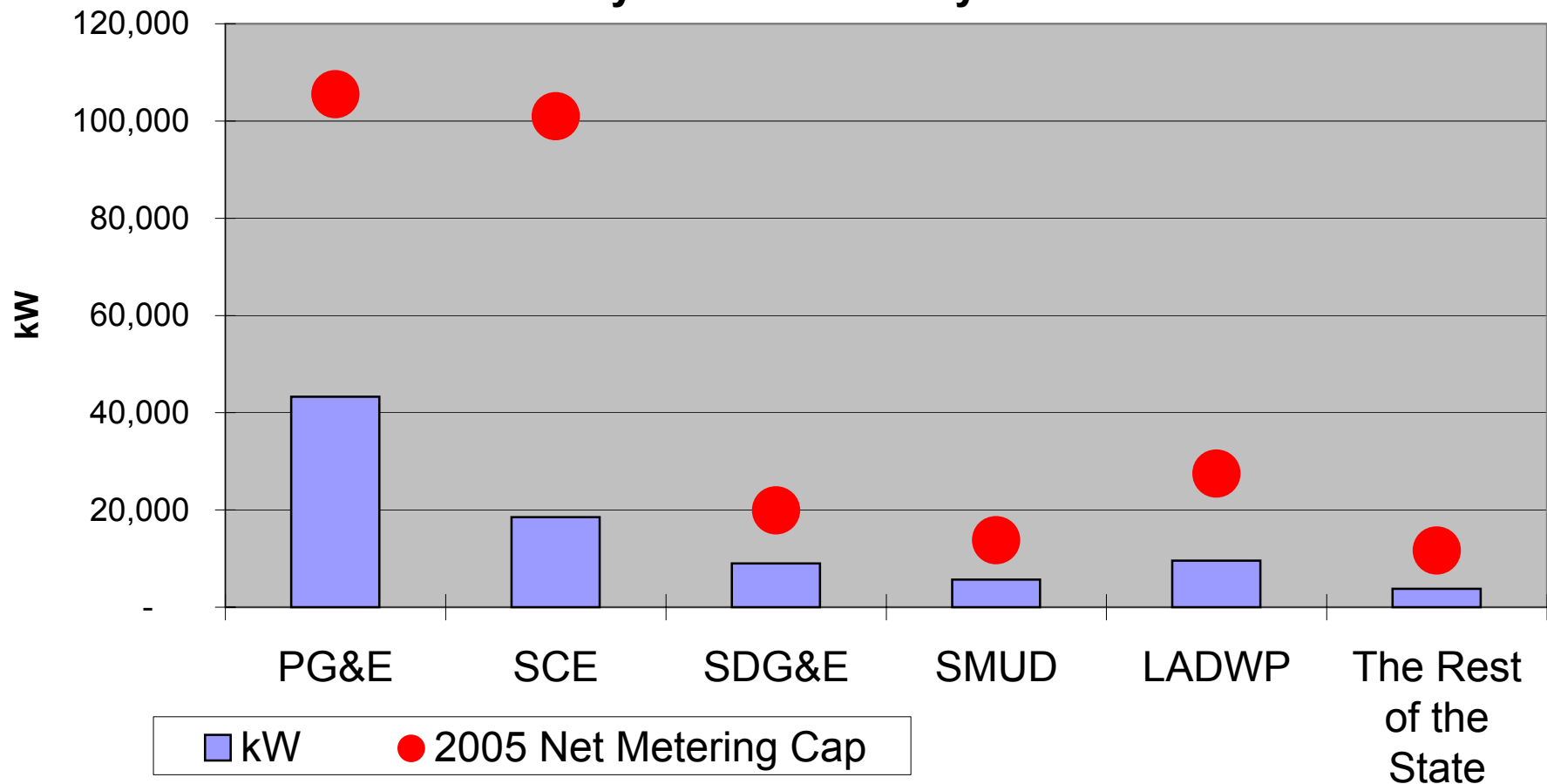
■ IOU

■ Local

## Grid-Connected PV Capacity Installed in California by Service Territory



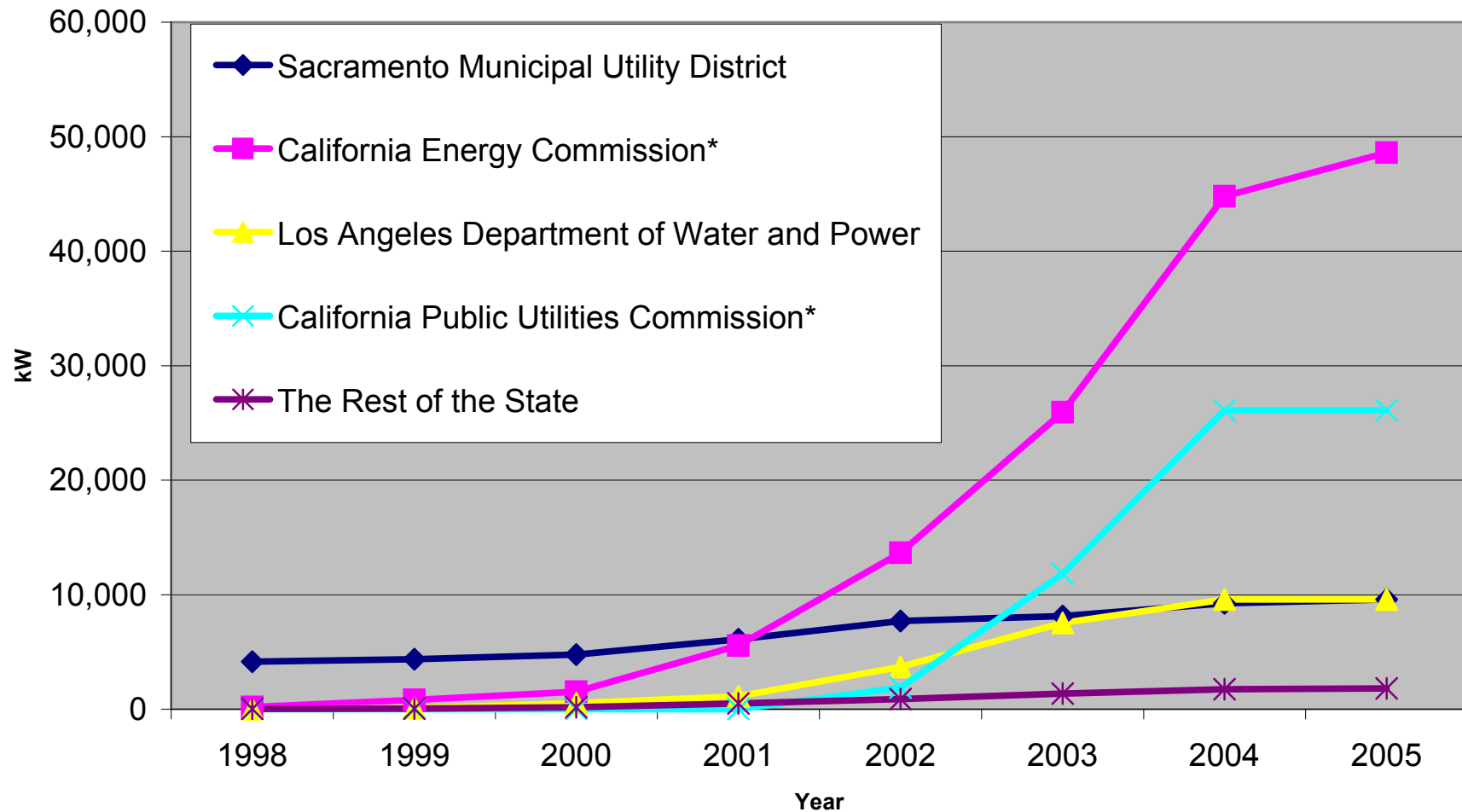
## Estimated Net Metering Caps and Grid-Connected PV Capacity Installed in California by Service Territory



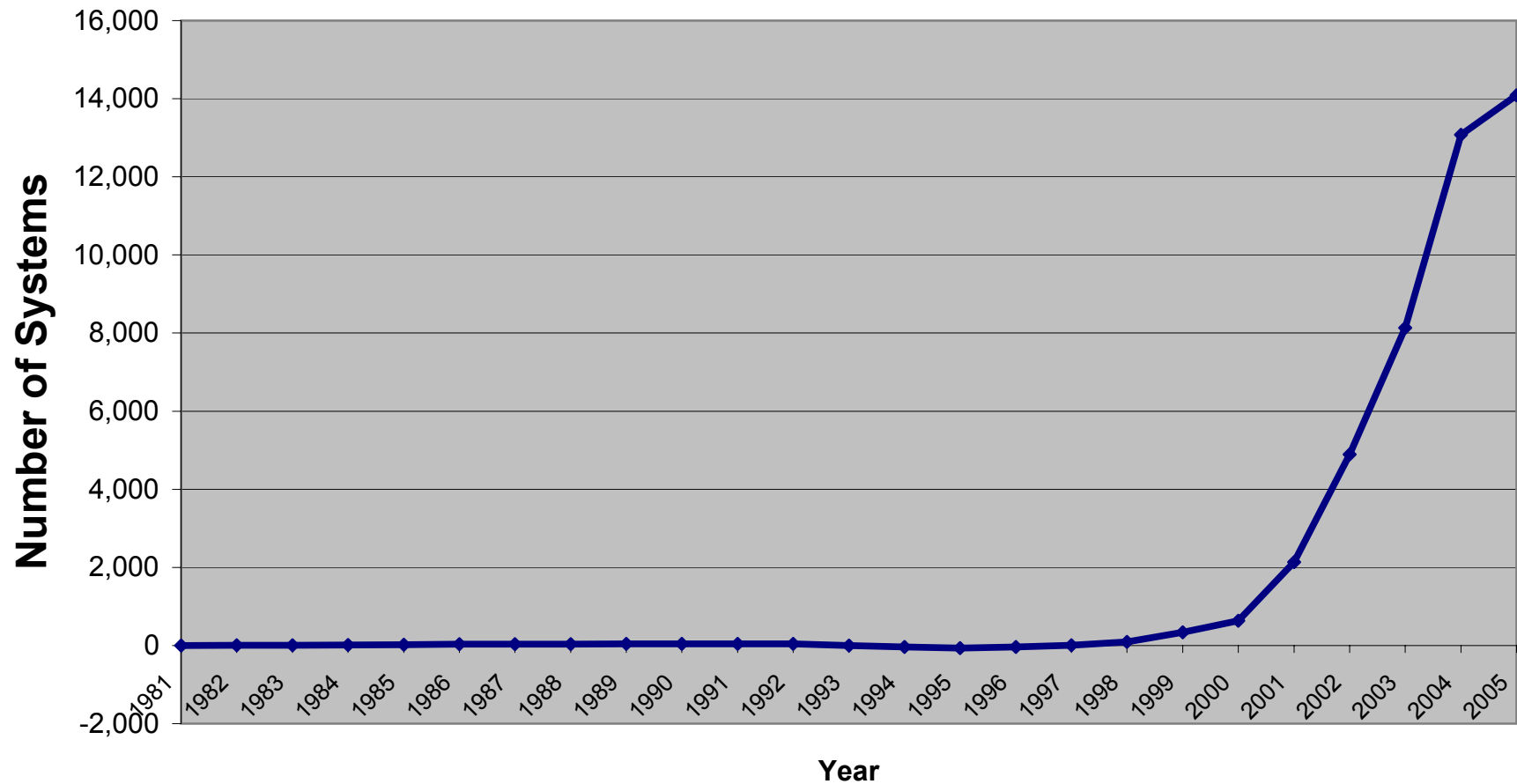
LADWP is exempted from the AB 58 net metering provisions. However, an estimated cap is provided for LADWP as if the cap did apply to them.

# Grid-Connected PV Capacity Installed in California

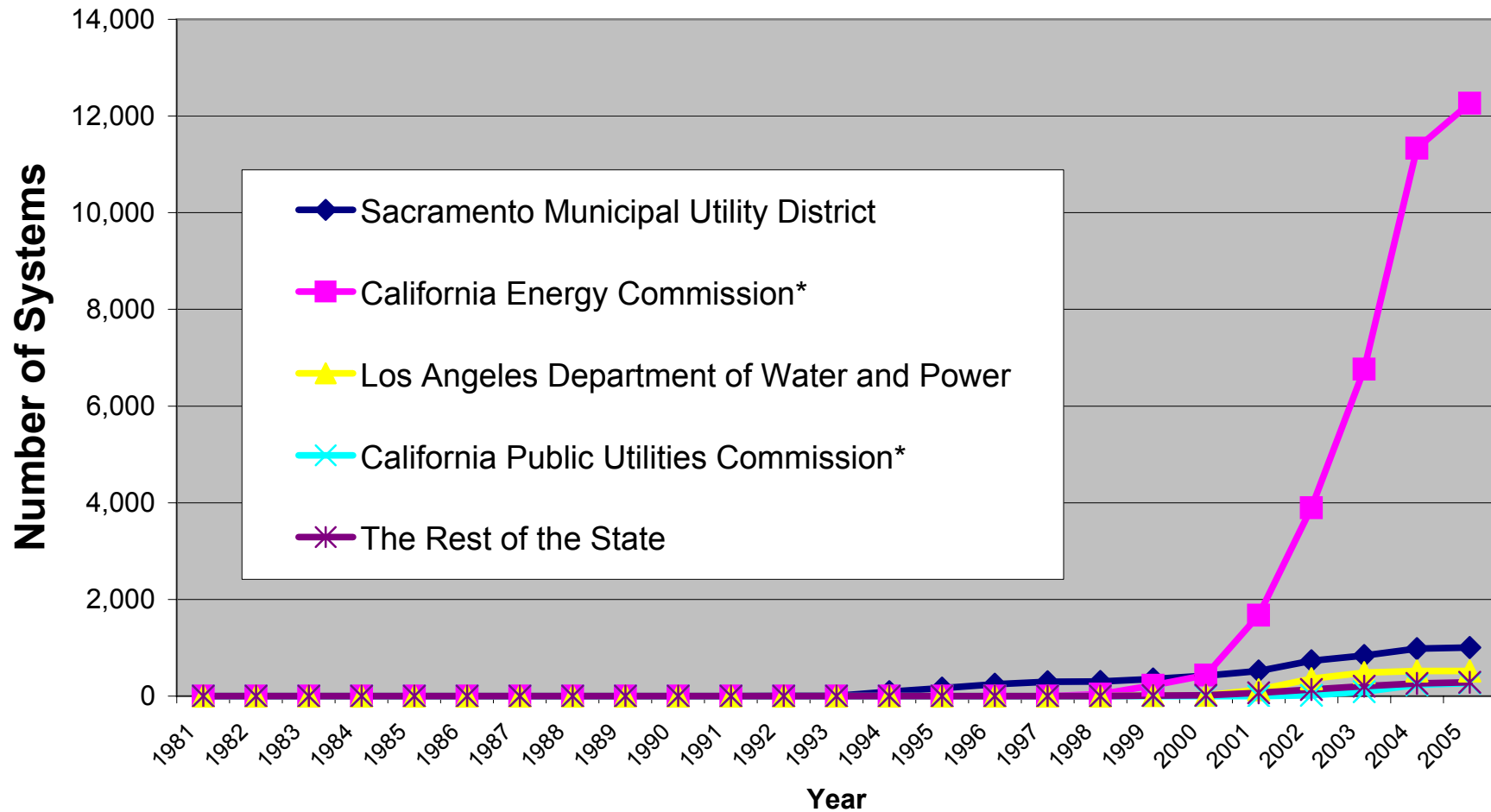
## Cumulative kW Installed by Program: 1998 - 2004



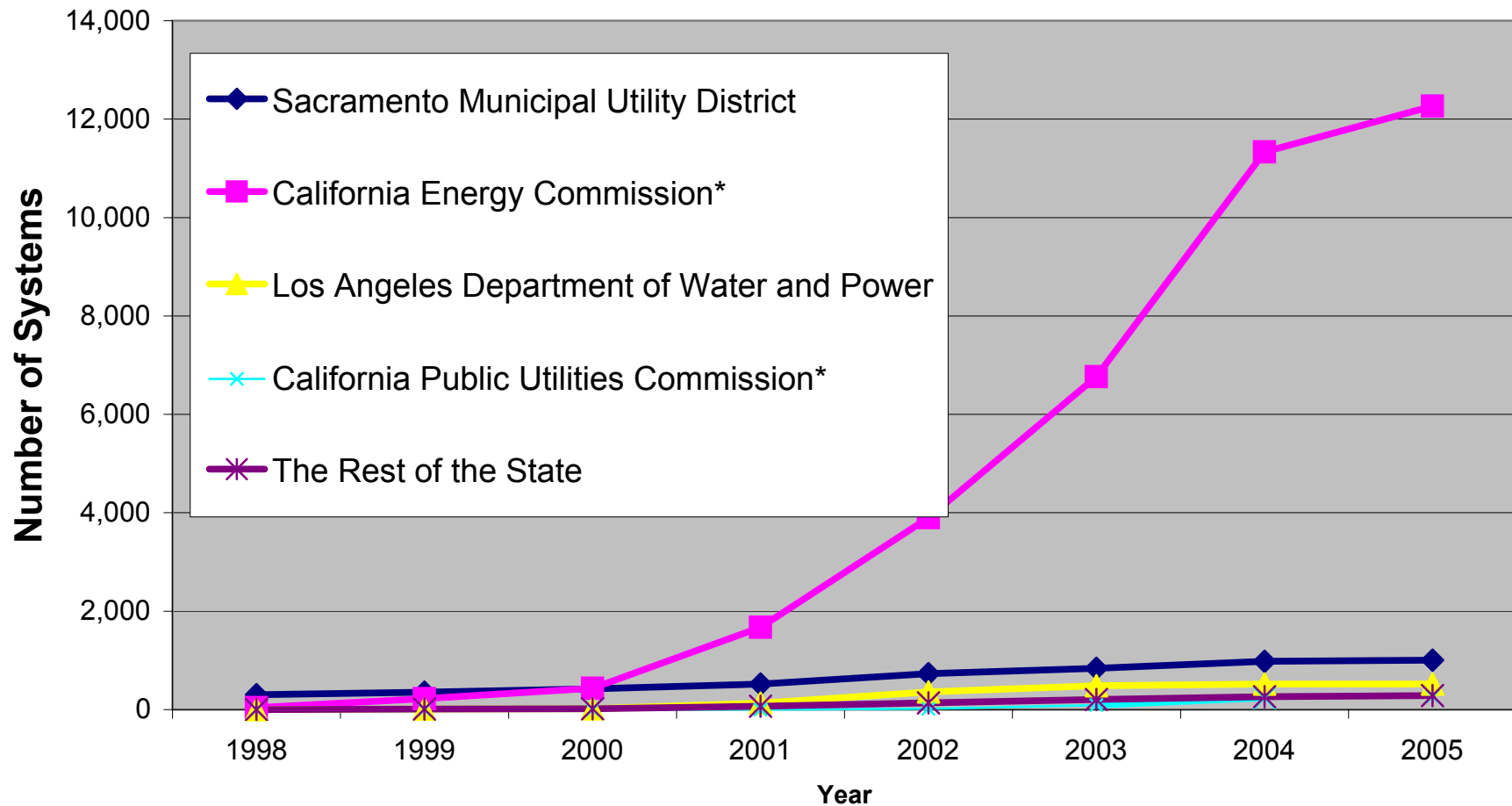
# Number of Grid-Connected PV Systems Installed In California Cumulative



# Number of Grid-Connected PV Systems Installed in California Cumulative by Program



# Number of Grid-Connected PV Systems Installed in California Cumulative, by Program, 1998-2004



# Grid-Connected PV Program Contacts in California

Program	Contact	Telephone	Email
California Energy Commission*	Bill Blackburn	916-653-2834	<a href="mailto:Bblackbu@energy.state.ca.us">Bblackbu@energy.state.ca.us</a>
California Public Utilities Commission*			
PG&E	Dean Heatherington	415-973-2362	<a href="mailto:DAH7@pge.com">DAH7@pge.com</a>
SCE	Howard Green	626-302-8436	<a href="mailto:greenh@sce.com">greenh@sce.com</a>
SDG&E/SDREO	Nathalie Osborn	858 244-1193	<a href="mailto:nathalie.osborn@sdenergy.org">nathalie.osborn@sdenergy.org</a>
SCGC	Marshall Kiyohiro	213-244-5619	<a href="mailto:selfgeneration@socalgas.com">selfgeneration@socalgas.com</a>
Sacramento Municipal Utility District	Mike Keesee	916-732-5244	<a href="mailto:MKeesee@smud.org">MKeesee@smud.org</a>
Los Angeles Department of Water and Power	Josephine Gonzalez	213-367-3151	<a href="mailto:josephine.gonzalez@ladwp.com">josephine.gonzalez@ladwp.com</a>
City of Palo Alto Utilities	Lindsay Joye	650-329-2241	<a href="mailto:pvppartners@cityofpaloalto.org">pvppartners@cityofpaloalto.org</a>
City of Santa Clara Electric Utility	Leslie Brown	408-244-SAVE	<a href="mailto:lbrown@ci.santa-clara.ca.us">lbrown@ci.santa-clara.ca.us</a>
City of Pasadena Water and Power	Mauricio Mejia	626-744-6970	<a href="mailto:mmejia@ci.pasadena.ca.us">mmejia@ci.pasadena.ca.us</a>
City of Burbank Water and Power	John Joyce	818-238-3653	<a href="mailto:jjoyce@ci.burbank.ca.us">jjoyce@ci.burbank.ca.us</a>
City of Anaheim Public Utilities	Dina Predisik	714-765-4182	<a href="mailto:dpredisik@anaheim.net">dpredisik@anaheim.net</a>
City of Redding Electric Utility	Paul Ahern	530-339-7241	<a href="mailto:pahern@reupower.com">pahern@reupower.com</a>
City of Glendale Water and Electric	Ned Bassin	818-548-2748	<a href="mailto:nbassin@ci.glendale.ca.us">nbassin@ci.glendale.ca.us</a>
City of Riverside Public Utilities	Atoya Mendez	951-351-6322	<a href="mailto:AMENDEZ@riversideca.gov">AMENDEZ@riversideca.gov</a>
City of Roseville Electric	Pat Morrison	916-774-5624	<a href="mailto:pmorrison@roseville.ca.us">pmorrison@roseville.ca.us</a>
Pacific Power	Michael Reid	503-813-6052	<a href="mailto:michael.reid@pacificorp.com">michael.reid@pacificorp.com</a>
City of Alameda Power and Telecom	Don Rushton	510-748-3946	<a href="mailto:drushton@alamedapt.com">drushton@alamedapt.com</a>
City of Ukiah Public Utilities	Cindy Sauers	707-463-6295	<a href="mailto:cindys@cityofukiah.com">cindys@cityofukiah.com</a>
City of Lodi Electric Utility	Rob Lechner	209-333-6800 x 2583	<a href="mailto:rlechner@lodieletric.com">rlechner@lodieletric.com</a>
Imperial Irrigation District	Bob Fugett	760-482-3430	<a href="mailto:mfugett@iid.com">mfugett@iid.com</a>
Modesto Irrigation District	Jack Krieg	209-526-7393	<a href="mailto:jackk@mid.org">jackk@mid.org</a>
Azusa Light and Water Department	Bob Tang	626-812-5214	<a href="mailto:btang@ci.azusa.ca.us">btang@ci.azusa.ca.us</a>
Healdsburg Municipal Electric Department	Pete Frates	707-431-3346	<a href="mailto:PFrates@ci.healdsburg.ca.us">PFrates@ci.healdsburg.ca.us</a>
City of Lompoc Electric Department	Mary Kammer	805-875-8298	<a href="mailto:M_Kammer@ci.lompoc.ca.us">M_Kammer@ci.lompoc.ca.us</a>
Truckee-Donner Public Utilities	Scott Terrell	530-587-3896	<a href="mailto:ScottTerrell@TDPUD.ORG">ScottTerrell@TDPUD.ORG</a>



## Grid-Connected PV Program Alternate Contacts in California

Program	Contact	Telephone	Email
<b>California Energy Commission*</b>	Todd Lieberg	916-654-4059	<a href="mailto:tlieberg@energy.state.ca.us">tlieberg@energy.state.ca.us</a>
<b>California Public Utilities Commission*</b>			
PG&E	Sara Birmingham	415-973-5187	<a href="mailto:sebb@pge.com">sebb@pge.com</a>
SCE	Mei Wong		<a href="mailto:Mei.Wong@sce.com">Mei.Wong@sce.com</a>
SDG&E/SDREO	Benjamin Airth	858-244-1194	<a href="mailto:benjamin.airth@sdenergy.org">benjamin.airth@sdenergy.org</a>
SCGC	Tony Prietto	213-244-3679	<a href="mailto:aprieto@semprautilities.com">aprieto@semprautilities.com</a>
<b>Sacramento Municipal Utility District</b>	Obadiah Bartholomy	(916) 732 6835	<a href="mailto:OBartho@smud.org">OBartho@smud.org</a>
<b>Los Angeles Department of Water and Power</b>	Paul Costa or Thomas Honles	213-367-4125 or 213-367-3151	<a href="mailto:paul.costa@ladwp.com">paul.costa@ladwp.com</a> or <a href="mailto:thomas.honles@ladwp.com">thomas.honles@ladwp.com</a>
<b>City of Palo Alto Utilities</b>	Lindsay Joye	650-329-2241	<a href="mailto:pvpartners@cityofpaloalto.org">pvpartners@cityofpaloalto.org</a>
<b>City of Santa Clara Electric Utility</b>	Leslie Brown	408-244-SAVE	<a href="mailto:lbrown@ci.santa-clara.ca.us">lbrown@ci.santa-clara.ca.us</a>
<b>City of Pasadena Water and Power</b>	Mauricio Mejia	626-744-6970	<a href="mailto:mmejia@ci.pasadena.ca.us">mmejia@ci.pasadena.ca.us</a>
<b>City of Burbank Water and Power</b>	John Joyce	818-238-3653	<a href="mailto:jjoyce@ci.burbank.ca.us">jjoyce@ci.burbank.ca.us</a>
<b>City of Anaheim Public Utilities</b>	Dina Predisik	714-765-4182	<a href="mailto:dpredisik@anaheim.net">dpredisik@anaheim.net</a>
<b>City of Redding Electric Utility</b>	Pam Brady-Koss	530-339-7215	<a href="mailto:pbradykoss@reddingelectricutility.com">pbradykoss@reddingelectricutility.com</a>
<b>City of Glendale Water and Electric</b>	Ned Bassin	818-548-2748	<a href="mailto:nbassin@ci.glendale.ca.us">nbassin@ci.glendale.ca.us</a>
<b>City of Riverside Public Utilities</b>	Atoya Mendez	951-351-6322	<a href="mailto:AMENDEZ@riversideca.gov">AMENDEZ@riversideca.gov</a>
<b>City of Roseville Electric</b>	Pat Morrison	916-774-5624	<a href="mailto:pmorrison@roseville.ca.us">pmorrison@roseville.ca.us</a>
<b>Pacific Power</b>	Michael Reid	503-813-6052	<a href="mailto:michael.reid@pacificorp.com">michael.reid@pacificorp.com</a>
<b>City of Alameda Power and Telecom</b>	Don Rushton	510-748-3946	<a href="mailto:drushton@alamedapt.com">drushton@alamedapt.com</a>
<b>City of Ukiah Public Utilities</b>	Cindy Sauers	707-463-6295	<a href="mailto:cindys@cityofukiah.com">cindys@cityofukiah.com</a>
<b>City of Lodi Electric Utility</b>	Rob Lechner	209-333-6800 x 2583	<a href="mailto:rlechner@lodieletric.com">rlechner@lodieletric.com</a>
<b>Imperial Irrigation District</b>	Bob Fugett	760-482-3430	<a href="mailto:rnfugett@iid.com">rnfugett@iid.com</a>
<b>Modesto Irrigation District</b>	Jack Krieg	209-526-7393	<a href="mailto:jackk@mid.org">jackk@mid.org</a>
<b>Azusa Light and Water Department</b>	Bob Tang	626-812-5214	<a href="mailto:btang@ci.azusa.ca.us">btang@ci.azusa.ca.us</a>
<b>Healdsburg Municipal Electric</b>	Pete Frates	707-431-3346	<a href="mailto:PFrates@ci.healdsburg.ca.us">PFrates@ci.healdsburg.ca.us</a>
<b>City of Lompoc Electric Department</b>	Mary Kammer	805-875-8298	<a href="mailto:M_Kammer@ci.lompoc.ca.us">M_Kammer@ci.lompoc.ca.us</a>
<b>Truckee-Donner Public Utilities</b>	Scott Terrell	530-587-3896	<a href="mailto:ScottTerrell@TDPUD.ORG">ScottTerrell@TDPUD.ORG</a>

## Grid-Connected PV Capacity in California

## Graphing Data

YEAR

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
Sacramento Municipal Utility District	0	0	0	1,133	0	909	0	0	0	0	0	12	0	794	308	476	309	147	21	1,321	1,613	718	1,126	224		8,531
California Energy Commission*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	181	619	729	4,034	8,102	12,773	18,866	3,922		48,065
Pacific Gas and Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	81	365	487	2,041	4,951	7,418	11,909			31,596
Southern California Edison	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	120	290	133	1,118	2,108	3,356	4,936			13,160
San Diego Gas and Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	100	866	1,042	1,042	1,042	1,042			5,194
Bear Valley Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0			24
City of Anaheim Public Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	102	432	569	2,573	3,629	2,047	0			8,872
City of Redding Electric Utility	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,889	9,928	14,274	3,336			29,427
City of Glendale Water and Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
City of Riverside Public Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
City of Roseville Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
Pacific Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
City of Alameda Power and Telecom	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
City of Ukiah Public Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
City of Los Angeles Department of Water and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
Imperial Irrigation District	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
Moderate Irrigation District	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
Acsia Local Water and Water Department	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
Hoodburg Municipal Electric Department	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
City of Longport Electric Department	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
Truckee-Donner Public Utilities District	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
Cumulative Data below	37	38	11	1,126	15	971	0	4	59	15	17	477	806	336	250	378	110	464	0	0	0	0	0	0	0	1,918
Sacramento Municipal Utility District	0	0	0	1,133	1,133	2,042	2,042	2,042	2,042	2,042	2,042	2,042	2,042	2,042	2,042	2,042	3,390	3,682	3,990	4,378	4,765	5,152	5,539	5,927		106,861
Los Angeles Department of Water and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	181	800	1,526	5,561	13,662	25,935	44,781	48,603		
California Public Utilities Commission*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	102	534	1,123	3,696	7,525	9,572	9,572			
Pacific Gas and Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,889	11,817	26,091	26,091			
Southern California Edison	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,671	5,879	10,657	16,057			
San Diego Gas and Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	114	2,793	5,912	5,912			
City of Anaheim Public Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	74	2,045	2,992	2,992			
City of Redding Electric Utility	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	1,130	1,130	1,130			
City of Glendale Water and Electric	37	75	86	98	112	175	175	179	238	253	270	747	1,552	1,216	966	1,345	1,454	1,918	1,918	1,918	1,918	1,918	1,918	1,918		19,181
City of Pasadena Water and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	32	133	295	245	290	290			1,016
City of Burbank Water and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	36	50	54			164
City of Anaheim Public Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84	84	84	84			337
City of Redding Electric Utility	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	102	119	226	275			633
City of Glendale Water and Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			19
City of Riverside Public Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			16
City of Roseville Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9	64	107			159
Pacific Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	16	16	16			55
City of Alameda Power and Telecom	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4	5	5	5	5			24
City of Ukiah Public Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
City of Los Angeles Department of Water and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
Imperial Irrigation District	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
Moderate Irrigation District	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
Acsia Local Water and Water Department	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
Hoodburg Municipal Electric Department	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
City of Longport Electric Department	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
Truckee-Donner Public Utilities District	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
Total	37	38	11	1,145	15	971	0	4	59	15	17	477	806	458	128	854	418	798	967	1,791	6,260	14,270	25,910	36,777	7,652	106,861
Cumulative Total	37	75	86	1,231	1,245	2,217	2,217	2,221	2,220	2,295	2,312	2,601	3,606	4,064	4,193	5,046	5,465	6,263	7,230	8,931	15,191	29,761	56,672	93,349	100,901	
Total by Year Range	1981-1989	1990-1999	2000-2005																							
	9,280	4,950	9,827	#####																						
Energy Cost (PUC)	16,057																									
PGE	27,226	93.743																								
SCE	11,952	5.912																								
SDGE	6,018	2,992																								
SCGC	1,130																									
SMUD	-	9,871																								
LADWP	-	9,972																								
The Rest of the State	-	3,723																								
Number of Systems	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
The Rest of the State	37	75	86	1,231	1,245	2,217	2,217	2,221	2,220	2,295	2,312	2,601	3,606	4,064	4,193	5,046	5,465	6,082	6,430	7,404	9,631	14,111	18,800	22,477	22,811	97,565
California Energy Commission	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	181	800	1,526	5,561	13,662	25,935	44,781	48,603	
California Public Utilities Commission	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Number of Systems	2	2	4	5	6	17	0	1	4	1	2	-2	-45	-31	-30	24	48	86	246	296	1502	2751	3242	4948	1004	
Cumulative Total	2	4	8	13	19	36	36	37	41	42	44	42	-3	-34	-64	-40	8	94	340	636	2,138	4899	8311	13060	14004	
Energy Cost (PUC)	16,057																									
PGE	27,226	93.743																								
SCE	11,952	5.912																								
SDGE	6,018	2,992																								
SMUD	-	9,871																								
LADWP	-	9,972																								
The Rest of the State	-	3,723																								
2005 Net Metering Cap	100,000																									
PGE	43,293																									
SCE	18,544																									
SMUD	15,900																									
SDGE	5,075																									
LADWP	9,672																									
The Rest of the State	3,727																									
By Program	48,603																									
California Energy Commission*	29,427																									
California Public Utilities Commission*	9,672																									
Sacramento Municipal Utility District	3,727																									
Los Angeles Department of Water and Power	9,672																									
The Rest of the State	3,727																									
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										
100,901																										

# Grid-Connected PV Systems Installed in California

## YEAR

### Program

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total	
Sacramento Municipal Utility District	0	0	0	1	0	1	0	0	0	0	0	1	0	87	77	76	55	7	47	69	100	209	107	147	23	1,007	
California Energy Commission'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41	180	215	1,237	2,225	2,866	4,568	930	12,262	
Pacific Gas and Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	127	125	650	1,309	1,693	2,978	586	7,495	
Southern California Edison	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	47	59	310	584	710	985	161	2,870	
San Diego Gas and Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	31	275	332	456	605	183	1,888	
Bear Valley Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	7	0	0	9	
Los Angeles Department of Water and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	3	115	231	127	30	518		
California Public Utilities Commission	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	77	145	30	267	
Pacific Gas and Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	47	87	16	159	
Southern California Edison	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	23	41	9	76	
San Diego Gas and Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	17	5	30	
***Southern California Gas Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	
Pre-1998	2	2	4	4	6	16	0	1	4	1	2	-3	-45	-118	-108	-52	-7	37	0	0	0	0	0	0	0	-254	
City of Palo Alto Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	17	18	1	96	
City of Santa Clara Electric Utility	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	11	4	1	0	17	
City of Pasadena Water and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
City of Burbank Water and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	4	7	7	
City of Anaheim Public Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	11	11	16	1	47	
City of Redding Electric Utility	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	
City of Glendale Water and Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
City of Riverside Public Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5	5	3	15	
City of Roseville Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	20	18	4	16	59	
Pacific Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	
City of Alameda Power and Telecom	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
City of Ukiah Public Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	0	0	8	
City of Lodi Electric Utility	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Imperial Irrigation District	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	3	2	10	
Modesto Irrigation District	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
Azusa Light and Water Department	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
Healdsburg Municipal Electric Department	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
City of Lompoc Electric Department	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	
Truckee-Donner Public Utilities District	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	6	
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	7	9	50	71	65	59	21	14,084	
<b>TOTAL</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>17</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>-2</b>	<b>-45</b>	<b>-31</b>	<b>-30</b>	<b>24</b>	<b>48</b>	<b>86</b>	<b>246</b>	<b>296</b>	<b>1,502</b>	<b>2,751</b>	<b>3,242</b>	<b>4,949</b>	<b>1,004</b>		
<b>Cumulative Total</b>	<b>2</b>	<b>4</b>	<b>8</b>	<b>13</b>	<b>19</b>	<b>36</b>	<b>36</b>	<b>37</b>	<b>41</b>	<b>42</b>	<b>44</b>	<b>42</b>	<b>-3</b>	<b>-34</b>	<b>-64</b>	<b>-40</b>	<b>8</b>	<b>94</b>	<b>340</b>	<b>636</b>	<b>2,138</b>	<b>4,889</b>	<b>8,131</b>	<b>13,080</b>	<b>14,084</b>		
Sacramento Municipal Utility District	0	0	0	1	1	2	2	2	2	2	2	3	3	90	167	243	298	305	352	421	521	730	837	984	1,007	13,080	
California Energy Commission'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41	221	436	1,673	3,898	6,764	11,332	12,262		
Pacific Gas and Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	154	279	929	2,238	3,931	6,909	7,495		
Southern California Edison	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	61	120	430	1,014	1,724	2,709	2,870		
San Diego Gas and Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	37	312	644	1,100	1,705	1,888		
Bear Valley Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	9	9	9		
Los Angeles Department of Water and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	15	130	361	488	518	518		
California Public Utilities Commission	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	92	237	267		
Pacific Gas and Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	56	143	159		
Southern California Edison	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	26	67	76		
San Diego Gas and Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8	25	30		
***Southern California Gas Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	2		
Pre-1998	2	4	8	12	18	34	34	35	39	40	42	39	-6	-124	-232	-284	-291	-254	-254	-254	-254	-254	-254	-254	-254		
City of Palo Alto Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	10	38	60	77	95	96		
City of Santa Clara Electric Utility	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	12	16	17	17		
City of Pasadena Water and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
City of Burbank Water and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	3	3	7	7		
City of Anaheim Public Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8	19	30	46	47		
City of Redding Electric Utility	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5		
City of Glendale Water and Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
City of Riverside Public Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	7	12	15		
City of Roseville Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	21	39	43	59		
Pacific Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	3	3	3		
City of Alameda Power and Telecom	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
City of Ukiah Public Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	8	8	8		
City of Lodi Electric Utility	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Imperial Irrigation District	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	8	10	10	
Modesto Irrigation District	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	
Azusa Light and Water Department	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	
Healdsburg Municipal Electric Department	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	4	4		
City of Lompoc Electric Department	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3		
Truckee-Donner Public Utilities District	0	0	0																								